GENITOURINARY MEDICINE

Editor: A Mindel

President MSSVD: JRW Harris
Hon Sec MSSVD: M Godley
Assistant Editor: CA Carne

Assistant Editor, Abstracts: C Sonnex

G Bird
D A Cooper
L Corey
R A Coutinho
B A Evans
J S Greenspan

D J Jeffries F Judson C J N Lacey J M A Lange A G Lawrence A Méheus A R Moss R S Pattman P Piot M Stanley D Taylor-Robinson I V D Weller L Weström H Young A J Zuckerman H zur Hausen

Editor
British Medical Journal
Technical Editor:
Kenneth Till

This Journal, founded by the Medical Society for the Study of the Venereal Diseases, publishes original work on the investigation and treatment of genitourinary and allied disorders, and review articles, correspondence, and abstracts.

ADVICE TO AUTHORS Papers for publication, which will be accepted on the understanding that they have not been and will not be published elsewhere and are subject to editorial revision, should be sent in duplicate to Dr A Mindel, Academic Department of Genitourinary Medicine, James Pringle House, Middlesex Hospital, London W1N 8AA. All authors must give signed consent to publication. Submitted papers must be accompanied by the following statement, signed by all the authors: "No paper resembling the enclosed article has been or will be published except in Genitourinary Medicine. We transfer all copyright ownership to Genitourinary Medicine." Manuscripts will only be acknowledged if a stamped addressed postcard or international reply coupon is enclosed. Rejected papers will not be returned. Figures will be returned if requested at the time of submission.

Full details of requirements for manuscripts in the Vancouver style (BMJ 1982;284:1766-70) are given in Uniform requirements for manuscripts submitted to biomedical journals, available from the Publishing Manager, British Medical Journal, BMJ Publishing Group, BMA House (50p post free). Briefly details are as follows:

- (1) SCRIPTS (including correspondence and book reviews) must be typewritten on one side of the paper in double spacing with ample margins. Two copies should be sent.
- (2) EACH SCRIPT should include, in the following order: a brief summary (structured summaries are preferred), typed on a separate sheet, outlining the main observations and conclusions; the text divided into appropriate sections; acknowledgements; references; tables, each on a separate sheet; and legends for illustrations.
- (3) THE TITLE of the paper should be as brief as possible.
- (4) THE NUMBER OF AUTHORS should be kept to the minimum, and only their initials and family names used.
- (5) ONLY THE INSTITUTION(S) where work was done by each author should be stated.
- (6) SI UNITS must be used. If old fashioned units are used, SI units should be given in parentheses or, for tables and figures, a conversion factor given as a footnote.
- (7) ONLY RECOGNISED ABBREVIATIONS should be used.
- (8) ACKNOWLEDGEMENTS should be limited to workers whose courtesy or help extended beyond their paid work, and supporting organisations.
- (9) FIGURES should be numbered in the order in which they are first mentioned in the text. Captions should be typed on a separate sheet. DIAGRAMS: use thick, white paper and insert lettering lightly in pencil. PHOTOGRAPHS: should be marked lightly on the back with the author's name and indicating the top, and should not be attached by paper clips or pins. They should be trimmed to include only the relevant section (and will be reproduced 68 or 145 mm wide) to eliminate the need for reduction. Photomicrographs must have internal scale markers. Radiographs should be submitted as photographic prints, carefully prepared so that they bring out the exact point to be illustrated.
- (10) TABLES should be numbered, have titles, and be typed on separate sheets. Please avoid large tables and use the format which appears in current issues.

(11) REFERENCES should be numbered consecutively the first time they are cited and identified by arabic numbers in the text, tables, and legends to figures. Authors must take full responsibility for the accuracy of their references, and the list should be kept as short as practicable. It should be in the order in which references are first mentioned, and should include (in the following order), journals: author's name and initials, title of paper, name of journal (in full or abbreviated according to the list in *Index Medicus*), year of publication, volume number, and first and last page numbers; books: author's name and initials, full title, edition, place of publication, publisher, and year of publication. When a chapter in a book is referred to, the name and initials of the author of the chapter, title of the chapter, "In:", name and initials of the editor, and "ed" should precede book title, etc as above. In references to journals or books, when there are seven or more authors the names of the first three should be given followed by "et al." Names of journals no longer published or not in *Index Medicus* should be given in full — for example, British Journal of Venereal Diseases.

PROOFS Contributors receive one proof, and should read it carefully for printers' errors and check the tables, figures, legends, and any numerical, mathematical, or other scientific expressions. Alterations should be kept to a minimum.

REPRINTS A limited number of reprints may be ordered at cost from the Publishing Manager when the proofs are

NOTICE TO SUBSCRIBERS This Journal is published bimonthly. The annual subscription rates are £112.00 and \$196 in the USA. Subscribers may pay for their subscriptions by Access, Visa, or American Express by quoting on their orders the credit or charge card preferred, the appropriate personal account number, and the expiry date of the card. Orders should be sent to the Subscriptions Manager, Genitourinary Medicine, BMJ Publishing Group, BMA House, Tavistock Square, London WC1H 9JR. Orders can also be placed locally through any leading subscription agent or bookseller. (For the convenience of readers in the USA, subscription orders, with or without payment, can be sent to: British Medical Journal, Box 560B, Kennebunkport, Maine 04046. All inquiries, however, including those regarding air mail rates and single copies already published, should be addressed to the publisher in London.)

Second class postage paid, Rahway NJ Postmaster. Send address changes to: *Genitourinary Medicine* c/o Mercury Airfreight International Ltd Inc, 2323 Randolph Avenue, Avenel, NJ 07001, USA.

NOTICE TO ADVERTISERS Applications for advertisement space and for rates should be addressed to the Advertisement Manager, Genitourinary Medicine, BMJ Publishing Group, BMA House, Tavistock Square, London WC1H 9IR.

COPYRIGHT © 1992 by Genitourinary Medicine. This publication is copyright under the Berne Convention and the International Copyright Convention. All rights reserved. Apart from any relaxations permitted under national copyright laws, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior permission of the copyright owners. Permission is not, however, required to copy abstracts of papers or of articles on condition that a full reference to the source is shown. Multiple copying of the contents of the publication without permission is always illegal.

ISSN 0266-4348

Published by BMJ
Publishing Group,
and printed by
Eyre & Spottiswoode Ltd,
London and Margate

66 Notices

NOTICES

Organisers of meetings who wish to insert notices should send details to the editor (address on the inside front cover) at least eight months before the date of the meeting or six months before the closing date for applications.

The Midlands Society of Genito-Urinary Medicine

The Annual General and Scientific Meeting of the Midlands Society of Genito-Urinary Medicine was held at the Lincoln County Hospital on the 29-30 June 1991. The host team, led by Dr Mohammed Shahidullah, organised a varied programme. Morning sessions on Resource Management and Cervical Screening were followed by the keynote address to the Society by Dr Martin Plant, Director of Alcohol Research at Edinburgh University entitled "Alcohol, Sex, Drugs and AIDS risk'. He was supported by Karen Hughes, Co-ordinator at the Nottingham Health Shop. She spoke of the facilities and services provided in this novel development. Six short papers were then presented to delegates before the business meeting. In the evening,, Dr R Morton was guest speaker at the Society Dinner. On Sunday morning, a lively discussion of the posters presented took place.

The next Annual Meeting will take place at Worcester on 3-4 October 1992. Further announcements will be made in these columns.

VINCENT RILEY Hon Sec Midlands Society GUM

Report of the Honorary Secretary to the 70th Annual General Meeting of MSSVD held at the Royal Society of Medicine on 1 November 1991

Over the last 12 months the membership of the Society has risen from 557 to 582—of whom 153 are from 44 overseas countries. No honorary life members were elected. The deaths of four members were recorded: Dr Pierre Durel, Dr Axel Perdup, Dr Malcolm Gellan and Dr A E Tinkler.

Five ordinary general meetings were held; the February one was cancelled because of extreme weather conditions. The remaining meetings were all well attended, each by over 100 members. The Society is grateful to the Royal Society of Medicine for allowing the meetings to be held in The Barnes Hall and to Gist-brocades, and The Wellcome Foundation for providing financial support.

The Janssen prize for the best paper presented by a junior member at the October OGM was awarded to Dr Sarah Gill. The MSSVD Undergraduate Prize was awarded to Ms Sara Williams of Caius College, Cambridge. The Spring Meeting, a joint meeting with the German Society for Sexually Transmitted Diseases, was held in Heidelberg, Germany, from 30 May to 2 June 1991. Attendance at the Spring Meeting continues to increase, and this year's meeting was attended by 200 delegates and 37 guests. A record number of papers were presented—

44 as oral presentations and 92 as posters. The fourth MSSVD Spring Meeting Prize for the best oral presentation was awarded to Dr Sue Mitchell from St Thomas' Hospital. A new prize for the best poster presentation was shared by Dr Nigel O'Farrell from St Thomas' Hospital and Dr David Tomlinson from St Mary's Hospital. The social events were most enjoyable and the Society is grateful to Professor Detlef Petzoldt for hosting such a splendid meeting.

The Society thanks the pharmaceutical companies for providing generous sponsor-ship—in particular Bayer UK, Janssen Pharmaceuticals, KabiVitrum, Pfizer, Rhone-Poulenc-Rohrer, SmithKline Beecham and the Wellcome Foundation.

A joint study day with the International Society for the study of Vulvar Disease was held at the Randolph Hotel, Oxford on 27 September 1991 with speakers drawn from both societies. The day was attended by 120 delegates and was most successful.

The Tenth Genitourinary Medicine Study Weekend for doctors in training was held in Tetley Hall, The University of Leeds on 13 and 14 April 1991. Ninety eight participants enjoyed an interesting scientific programme. The Society is grateful to Bayer UK for providing full financial support. The next meeting will be held on 4–5 April 1992, in Leeds, again with Bayer providing full support.

The Council of the Society met on five occasions and among the items discussed were the following: The UEMS and dermato-venereology; cervical cytology, confidentiality and GUM clinics; Patient confidentiality following the introduction of cross-border district charging; medical audit in genitourinary medicine; patient consent to examination or treatment; consultants contracts and job plans; the Access to Health Records Bill. A working party was established to consider the interface of genitourinary medicine and gynaecology.

Genitourinary Medicine, Volume 66, in 1990 contained 473 pages with 76 original articles from 25 different countries, 13 reviews, two conference reports and 25 letters. Two new features were the placing of the contents on the front cover and a section entitled "Matters arising" in which letters concerning previously published papers were printed. The articles covered the full range of sexually transmitted diseases and HIV, including laboratory based, epidemiological, sociological and clinical studies. The majority were published within 4 months of acceptance and some of particular importance within 2 months. Dr Adrian Mindel's hard work as Editor continues to reap rewards and the Society is grateful to him.

The work of the Honorary Secretary has continued to increase. The Society now has its own computerised membership system and fax machine but my job would not have been possible without the help of my two loyal secretaries-Mrs Elaine Ghent and Mrs Nancy McEwan. The support provided by the Honorary Treasurer and the Honorary Assistant Secretary has been enormous but the support and help provided by Dr Michael Waugh has been invaluable. I have been able to benefit from his experience gained from 8 years as Secretary before becoming President of the Society two years ago. He has given so much to this Society and I am sure he will continue to do so. I know you will want to join with me in thanking Dr Michael Waugh.

MJ GODLEY

Second congress of the European Society of Contraception, Athens, Greece 6-9 May 1992

The theme of the Congress is: "Contraception benefits and risks".

For further information contact: Prof G Creatsas MD FACS, President Organizing Committee, 9 Kanari Str. Athens 10671, Greece. Tel: +301-77 70 850, +301-36 24 367. Fax: +301-36 20 484.

18th World Congress of Dermatology— New York, 12-18 June 1992

The next (18th) World Congress of Dermatology will take place in New York City from 12-18 June 1992. "Dermatology—Progress and Perspectives" is the theme of the 6 day programme, focusing on the most recent advances and important issues in worldwide dermatology, and future directions in research and therapy. The Congress will provide a stimulating educational experience and a unique opportunity for dermatologists to interact with colleagues from all over the world.

John S Strauss has been named President of the Congress, and Stephen I Katz will serve as the Secretary General. Honorary Presidents are Rudolf L Baer and Clarence S Livingood. Alan R Shalita is the Deputy Secretary General.

The preliminary programme, abstract forms, and registration materials can be obtained from the 18th Congress Secretariat, 22 Euclid Street, Woodbury, NJ 08096, USA

Royal College of Obstetricians & Gynaecologists

The 26th British Congress of Obstetrics & Gynaecology will take place at the University of Manchester Institute of Science and Technology, Manchester, England from 7-10 July 1992. Information available from BCOG Secretariat, 65 West Drive, Cheam, Sutton, Surrey, SM2 7NB, UK.

The Medical Society for the Study of Venereal Diseases (MSSVD) Undergraduate Prize—Regulations

- 1 A prize of £200.00, to be called the MSSVD Undergraduate Prize, will be awarded annually by the MSSVD (provided an entry of a suitable standard is received).
- 2 Entries for the prize will take the form of a report written in English.
- 3 The subject of the report should be related to sexually transmitted disease, genitourinary medicine, or human immunodeficiency virus (HIV) related infection.
- 4 The report should concern original and unpublished observations made by the entrant. The report, which should not exceed 2000 words, should include an introduction to the subject, methods used to make the observations, findings, and

discussion. A summary of the report should also be provided on a separate sheet. Entries must be machine or type written, with double spacing, on one side only of A4 paper. Three copies must be submitted.

- 5 The subject must be approved by a genitourinary physician at the entrant's medical school. The observation must be made before full registration. A winner may not enter for the prize again. Each entry should be accompanied by a declaration that these conditions have been fulfilled.
- 6 Entries should be submitted to the honorary secretary of the MSSVD by June 30 each year. They will then be considered by the president, the honorary secretary, and the honorary treasurer. When appropriate other experts may be consulted. These assessors will make recommendations to council, who will make the final decision concerning the prize.
- 7 Entries must be submitted within 12 months of full registration or its equivalent.
- 8 Regulations are obtainable from the honorary secretary of the MSSVD.
- 9 The assessors may ask the editor of an appropriate journal to consider an entry for publication. If so, it will be received for publication in the usual way.

The emphasis throughout the 90 minutes is more on love than sex and so many familiar and familiarising words and phrases occur and recur, for example, open discussion, the pleasures of touching, communication, trust, ridding oneself of guilt, and honesty.

Socio-biological terms such as courtship rituals, inappropriate expectations, selfstimulation, fantasy, emotional significance, genital geography and surrender are so used as to be so apt that they call for no definition.

It was the Kinsey reports of 1948 and 1953 which pointed out that masturbation is the commonest form of sexual activity. It receives detailed attention here as a solitary, instructive and mutually pleasurable activity. In an age when the educational cry is for safer sex, this emphasis is welcomed.

No aspect of sex is omitted. The practicalities of all forms of contraception includes an illustration of how to put on a condom. Banking semen before vasectomy receives a mention. The sexually transmitted diseases are viewed as a hazard to be positively avoided by monogamy and/or safer sex. The action needed to neutralise the anxiety that may arise from failure of hazard avoidance is made clear.

The British Board of Film Classification has wisely granted Dr Stanway's endeavours an 18 certificate. This video is available legally in your favourite High Street video shop. Its comprehensive approach, completely free from any hint of impropriety, means that it can be recommended not only to patients but to one's maiden aunt as well as to couples determined to be happy though married.

RS MORTON

The results have been disappointingly negative but the modern technology deployed has cleared much ground. Such detailed explorations make for several suggestions for future work. The research report is sandwiched between a very up-to-date history of the treponematoses and a summary of the research which is notable for its concise and simple clarity.

A young British-born acquaintance of mine who has lived and worked in various parts of Europe for the last 12 years recently observed "There is a far-seeing sense of civilisation on the Continent which you offshore islanders know and care little about".

The socio-epidemiological awareness behind this research, the quality of the work and not least the private enterprise which assured its printing and free distribution suggests that the observation may be apt.

The comprehensive nature of Gerda Moordhoek's presentation appealed to me in a variety of ways. She offers a pearl in a very acceptable setting.

RS MORTON

All titles reviewed here are available from the BMJ Bookshop, PO Box 295, London WC1H 9TE. Prices include postage in the UK and for members of the British Forces Overseas, but overseas customers should add 15% to the value of the order for postage and packing. Payment can be made by cheque in sterling drawn on a UK bank, or by credit card (Mastercard, Visa, or American Express) stating card number, expiry date, and full name.

BOOK REVIEWS

The Lovers' Guide. A Stanway. Pickwick Videos, 18, £12.99.

Pornography may be defined as any written, photographic or filmed material calculated to engender sexual excitement. How to produce a video showing individual men and women and couples demonstrating all forms of sexual activity in a way calculated to avoid accusations of "Porno!" is the singular achievement of this video. Its aim is clearly stated as "to enhance sexual relationships". Dr Andrew Stanway pursues this aim with relentless earnestness. Thus after the first 15-20 minutes of writhing flesh one is suddenly conscious that one's concentration is firmly fixed on the well-honed text with the illustration of couplings no more than an essential accompaniment. All forms of what Kinsey used to call sexual "outlet" ie sex to orgasm are fully demonstrated as are a variety of positions with the advantages of each discussed.

In terms of content, sequencing and filming, the work is packed with detail; love, sex and love-making and the nuances of each are dealt with and discussed unreservedly. The candid camera operates with good taste throughout. Appropriate lighting and unobtrusive music give the production a smooth and thoroughly modern professionalism. The script has received the benefits of semantic consciousness, so that it flows easily and so faultlessly that it offers no chance of giving offence.

Syphilis and Yaws. By G T Moordhoek. A Molecular Study to Detect and Differentiate Pathogenic Triponemes. Amsterdam, The Netherlands Organisation for Scientific Research and the Vrije Universiteit. (139pp. Free. Paperback).

This research is timely. It is published at a time when there is a resurgence of yaws around the world in countries between the Tropics of Cancer and Capricorn, when endemic venereal syphilis is showing occasional epidemic peaks, and when excolonial powers are reporting endemic treponematoses in immigrants from their former colonies. In addition, the arrival of HIV/AIDS is bringing in its wake reports of unusual presentations of syphilis and reports of immunosuppression leading to false negative serological tests for the disease.

It is against this background and the long existing social, clinical and laboratory limitations on the differentiation of the treponematoses that this research has been planned and executed.

Its aim has been to find a difference between T pallidum and T pertenue at the molecular level and to use this to differentiate, and so diagnose with assurance, syphilis from yaws. A sufficiently sensitive specific method using DNA amplification was sought with the hope that even small numbers of treponemes could be detected and differentiated.

The serological methodology is detailed and the minutiae of the attempts to distinguish the two organisms by polymerase chain reaction and use of synthetic DNA probes is presented in a readily understandable fashion. Studies of specimens of CSF are included.

CURRENT PUBLICATIONS

Selected titles from recent reports published worldwide are arranged in the following sections:

Gonorrhoea Chlamydia Pelvic inflammatory disease Non-specific genital infection Candidiasis Bacterial vaginosis Trichomoniasis Syphilis and other treponematoses Herpes simplex virus Human papillomavirus infection Cervical cytology and colposcopy Other sexually transmitted diseases Public health and social aspects Microbiology and Immunology Dermatology Miscellaneous

Gonorrhoea

An unusual presentation of gonococcal arthritis in an HIV positive patient

IS STRONGIN, SA KALE, MJ RAYMOND, RL LUSKIN, GW WEISBERG, JJ JACOBS, Ann Rheum Dis 1991;50:572.

Gonococcal endocarditis complicating pregnancy—a case report and literature review KL BATASKOV, S HARIHARAN, MD HOROWITZ, RM NEIBART, MM COX, Obstet Gynecol 1991;78:494.

A comparison of single-dose cefixime with ceftriaxone as treatment for uncomplicated gonorrhoea

HH HANDSFIELD, WM McCORMACK, EW HOOK, JM DOUGLAS, JM COVING, MS VERDON, CA REICHART, JM EHRET, N Engl J Med 1991;325:1337.

Treatment of gonorrhoea with sulbactam/ampicillin

YF NGEOW, S RAMACHANDRAN, YM CHEONG, Sex Transm Dis 1991;18:192.

Effect of human chorionic gonadotropin (hCG) on Neisseria gonorrhoeae invasion of and IgA secretion by human fallopian tube mucosa GL GORBY, CM CLEMENS, LR BARLEY, ZA McGEE, Microbial Pathogen 1991;10:373.

Disk diffusion method for susceptibility testing of Neisseria gonorrhoeae

S RINGERTZ, M RYLANDER, G KRONVALL, J Clin Microbiol 1991;29:1604.

Epidemiological typing of Neisseria gonorrhoeae—a comparative analysis of three monoclonal antibody serotyping panels A MOYES, H YOUNG, Eur J Epidemiol 1991;7:31.

Comparison of agar media used for determining antimicrobial susceptibility of *Neisseria* gonorrhoeae

AL BARRY, PC FUCHS, J Antimicrob Chemother 1991;28:149.

Multilocus enzyme analysis of African type penicillinase-producing Neisseria gonor-rhoeae (PPNG) strains isolated in Spain L DELAFUENTE, JA VAZQUEZ, Sex Transm Dis 1991; 18:150.

Chromosomal resistance to antibiotics in gonococci from Bahrain

JM BINDAYNA, CSF EASMON, CA ISON, Sex Transm Dis 1991;18:153.

Proposed interpretive criteria and quality control parameters for testing in vitro susceptibility of *Neisseria gonorrhoeae* to ciprofloxacin

PC FUCHS, AL BARRY, C BAKER, PR MURRAY, JA WASHINGTON, J Clin Microbiol 1991;29:2111.

Molecular evolution of tetracycline-resistance plasmids carrying TetM found in Neisseria gonorrhoeae from different countries
DM GASCOYNE, J HERITAGE, PM HAWKEY, A TURNER,
B VANKLINGEREN, J Antimicrob Chemother 1991;

The role of pili in the interactions of pathogenic neisseria with cultured human endothelial cells

m virji, h kayhty, djp ferguson, c alexandrescu, je heckels, er moxon, *Mol Microbiol* 1991;5:183.

Bacterial entry and intracellular processing of *Neisseria gonorrhoeae* in epithelial cells immunomorphological evidence for alterations in the major outer membrane protein PIB

JFL WEEL, CYP HOPMAN, JPM VANPUTTEN, J Exp Med 1991;174:705.

Proteolysis of bacterial membrane proteins by *Neisseria gonorrhoeae* type-2 immunoglobulin-A1 protease

RJ SHOBERG, MH MULKS, Infect Immun 1991;59:2535.

Physical map of the chromosome of *Neisseria* gonorrhoeae FA1090 with locations of genetic markers including opa and pil genes

JAF DEMPSEY, W LITAKER, A MADHURE, TL SNODGRASS, JG CANNON, J Bacteriol 1991;173:5476.

Neisseria gonorrhoeae LPS variation, serum resistance and its induction by cytidine 5'-monophospho-N-acetylneuraminic acid RD DEHORMAECHE, R VANCREVEL, CE HORMAECHE, Microbial Pathogen 1991;10:323.

Effects of protein-1 of Neisseria gonorrhoeae on neutrophil activation—generation of diacylglycerol from phosphatidylcholine via a specific phospholipase-C is associated with exocytosis

KA HAINES, J REIBMAN, XY TANG, M BLAKE, G WEISS-MANN, *J Cell Biol* 1991;114:433.

Chlamydia

Age-related decrease in prevalence of *Chlamydia trachomatis* among pregnant women

H THEJLS, J GNARPE, H GNARPE, G LARSSON, Sex Transm Dis 1991;18:137.

The association between chlamydia cervicitis, chorioamnionitis and neonatal complications GGG DONDERS, P MOERMAN, GH DEWET, P HOOFT, P GOUBAU, *Arch Gynecol Obstet* 1991;249:79.

Culturing tubal pregnancies for Chlamydia trachomatis—is it beneficial?

R NEIGER, CS CROOM, Int J Fert 1991;36:215.

Intra-articular chlamydial antigen and inflammatory arthritis

RA HUGHES, E HYDER, JD TREHARNE, ACS KEAT, Q J Med 1991:80:575.

Electron microscopy of *Chlamydia trachomatis* infection of the male genital tract H VILLEGAS, M PINON, V SHOR, S KARCHMER, *Arch Androl* 1991;27:117.

Further details on sequelae at the cervical and tubal level of *Chlamydia trachomatis* infection in infertile women

GJ RUIJS, FM KAUER, S JAGER, FP SCHRODER, J SCHIRM, J KREMER, Fert Steril 1991;56:20.

The prevalence, risks and management of Chlamydia trachomatis infections in fertile and infertile patients from the high socioeconomic bracket of the South African population PH WESSELS, GH VILJOEN, NF MARIAS, JAA DEBEER, M SMITH, A GERICKE, Fert Steril 1991;56:485.

Comparative efficacy of clindamycin versus erythromycin in eradication of antenatal Chlamydia trachomatis

LS ALGER, JC LOVCHIK, Am J Obstet Gynecol 1991; 165:375.

Treatment of chlamydial conjunctivitis in newborns and adults with erythromycin and roxithromycin

K STEINBERG, PA MARDH, J Antimicrob Chemother 1991;28:301.

Chlamydia trachomatis antigen can be detected in the urine sample of men with nongonococcal urethritis

M TANAKA, T MATSUMOTO, J KUMAZAWA, H NAKAYAMA, Y MIYAZAKI, Urolog Res 1991;19:235.

Screening for *Chlamydia trachomatis* in military personnel by urine testing

A STARY, K STEYRER, C HELLERVITOUCH, I MULLER, PA MARDH, Infection 1991;19:205.

A comparison of urine and urethral swabbing for the diagnosis of *C trachomatis* infection in males

ID DAUL, T CROWLEY, JD MILNE, EO CAUL, Serodiag Immunother Infect Dis 1991;4:473.

Use of a urine enzyme immunoassay as a diagnostic tool for *Chlamydia trachomatis* urethritis in men

JR SCHWEBKE, AM CLARK, MB PETTINGER, P MSUBGA, WE STAMM, J Clin Microbiol 1991;29:2446.

Chlamydia trachomatis detection and non-invasive sampling methods

PE HAY, P HORNER, BJ THOMAS, D TAYLOR ROBINSON, GL RIDGWAY, Lancet 1991;338:188.

Comparison of the Clearview Chlamydia test, Chlamydiazyme and cell culture for detection of *Chlamydia trachomatis* in women with a low prevalence of infection

m skulnick, gw small, ae simor, de ow, h khosid, s fraser, r shua, *J Clin Microbiol* 1991;**29**:2086.

Comparison of two direct fluorescent antibody techniques and cell culture for the detection of Chlamydia trachomatis

ER DEARELLANO, A JIMENEZCARABALLO, G RODRIGUEZ-DONOSO, MC GUZMAN, A PASCUAL, Serodiag Immunother Infect Dis 1991;4:427.

Comparison of a DNA probe assay with culture for the detection of *Chlamydia trachomatis*

mi lees, dm newnan, sm garland, J Med Microbiol 1991;35:159.

Comparison of different culture media for isolation of *Chlamydia trachomatis* by cell culture on HeLa Cells

P HERBRINK, M ZUYDERWIJKZWINKELS, B NIESTERS, J WAGENVOORT, W VANDIJK, Eur J Clin Microbiol Infect Dis 1991;10:656.

Detection of *Chlamydia trachomatis* by direct immunofluorescence improved by centrifugation of specimens

B THOMAS, C GILCHRIST, D TAYLOR ROBINSON, Eur J Clin Microbiol Infect Dis 1991;10:659.

Evaluation of a chemiluminometric immunoassay and a direct immunofluorescence test for detecting *Chlamydia trachomatis* in urogenital specimens

V NEMANSIMHA, MC DELMASBEAUVIEUX, M GENIAUX, C BEBEAR, Eur J Clin Microbiol Infect Dis 1991;10:662.

Serological diagnosis with the Chlamydia spot-IF test

PT MANNION, H MALLINSON, JD TREHARNE, J Med Microbiol 1991;35:244.

Purification of *Chlamydia trachomatis* by a simple and rapid filtration method

S CAMPBELL, PS YATES, F WATERS, SJ RICHMOND, J Gen Microbiol 1991;137:156.

Immunoelectron microscopic localization of chlamydial lipopolysaccharide (LPS) in McCoy cells inoculated with *Chlamydia trachomatis*

SA HEARN, GLK McNABB, J Histochem Cytochem 1991:39:1067.

Analysis of the human serological response to Chlamydia trachomatis 60-kDa proteins by two-dimensional electrophoresis and immunoblotting

AM COLES, HA CROSBY, JH PEARCE, Fems Microbiol Lett 1991:81:299.

Neutralization of *Chlamydia trachomatis*-kinetics and stoichometry

RW PEELING, RC BRUNHAM, Infect Immun 1991; 59:2624.

In situ studies on incorporation of nucleic acid precursors into *Chlamydia trachomatis* DNA G McCLARTY, G TIPPLES, *J Bacteriol* 1991;173:4522.

Isolation and initial characterization of a series of *Chlamydia trachomatis* isolates selected for hydroxyurea resistance by a stepwise procedure

G TIPPLES, G McCLARTY, J Bacteriol 1991;173:4932.

Endocytic mechanisms utilized by chlamydiae and their influence of productive infection

DJ REYNOLDS, JH PIERCE, Infect Immun 1991;59:3033.

A single peptide from the major outer membrane protein of *Chlamydia trachomatis* elicits T-cell help for the production of antibodies to protective determinants

JE ALLEN, RM LOCKSLEY, RS STEPHENS, J Immunol 1991:147:674.

Lymphocyte proliferative responses to chlamydial antigens in human chlamydial eye infection

DCW MABEY, MJ HOLLAND, ND VISWALINGAM, BT GOH, S ESTREICH, A MACFARLANE, HM DOCKRELL, JD TREHARNE, Clin Exp Immunol 1991;86:37.

Role of L3T4-bearing T-cell populations in experimental murine chlamydial salpingitis DV LANDERS, K ERLICH, M SUNG, J SCHACHTER, *Infect Immun* 1991;59:3774.

Recombinant Escherichia-coli clones expressing Chlamydia trachomatis gene products attach to human endometrial epithelial cells DH SCHMIEL, ST KNIGHT, JE RAULSTON, J CHOONG, CH DAVIS, PB WYRICK, Infect Immun 1991;59:4001.

Pelvic inflammatory disease

Pelvic inflammatory disease L WESTROM, JAMA 1991;266:2612.

Cost of payment source for pelvic inflammatory disease—trends and projections, 1983 through 2000

AE WASHINGTON, P KATZ, JAMA 1991;266:2565.

Self-reported pelvic inflammatory disease in the United States, 1988

SO ARAL, WD MOSHER, W CATES, *JAMA* 1991; **266**:2570.

Preventing pelvic inflammatory disease AR WASHINGTON, W CATES, NJ WASSERHEIT, *JAMA* 1991;**266**:2574.

Assessing risk for pelvic inflammatory disease and its sequelae

AE WASHINGTON, SO ARAL, P WOLNERHANSSEN, DA GRIMES, KK HOLMES, JAMA 1991;266:2581.

Pathogenesis of pelvic inflammatory disease—what are the questions?

PA RICE, J SCHACHTER, JAMA 1991;266:2587.

Diagnosing pelvic inflammatory disease—a comprehensive analysis and considerations for developing a new model

JG KAHN, CK WALKER, AE WASHINGTON, DV LANDERS, RL SWEET, JAMA 1991;266:2594.

Pelvic inflammatory disease—key treatment issues and options

HB PETERSON, CK WALKER, JG KAHN, AE WASHINGTON, DA ESCHENBACH, S FARO, JAMA 1991;266:2605.

Recurrence of ectopic pregnancy—the role of salpingitis

MR JOESOEF, L WESTROM, G REYNOLDS, P MARCH-BANKS, W CATES, Am J Obstet Gynecol 1991;165:46.

Ciprofloxacin monotherapy for acute pelvic infections—a comparison with clindamycin plus gentamicin

H THADEPALLI, D MATHAI, R SCOTTI, MGB BANSAL, E SAVAGE, Obstet Gynecol 1991;78:696.

Treatment of acute pelvic inflammatory disease in the ambulatory setting—trial of cefoxitin and doxycycline versus ampicillin-sulbactam

M KOSSEIM, A RONALD, FA PLUMMER, L DCOSTA, RC BRUNHAM, Antimicrob Agents Chemother 1991; 35:1651.

Susceptibility of upper genital tract isolates from women with pelvic inflammatory disease to ampicillin, cefpodoxime, metronidazole and doxycycline

MB HASSELQUIST, S HILLIER, Sex Transm Dis 1991; 18:146.

The effect of ciprofloxacin and docycycline plus metronidazole on lower genital tract flora in patients with proven pelvic inflammatory dis-

a miettinen, s laine, k teisala, pk heinonen, Arch Gynecol Obstet 1991;249:79.

Increased inducibility of inflammatory mediators from peripheral blood mononuclear cells of women with salpingitis ss witkin, M toth, J Jeremias, WJ Ledger, Am J

Non-specific genital infection

Obstet Gynecol 1991;165:719.

Haemophilus parainfluenzae causing sexually transmitted urethritis—report of a case and evidence for a β-lactamase plasmid mobilizable to Escherichia coli by an Inc-W plasmid B FACINELLI, MP MONTANARI, PE VARALDO, Sex Transm Dis 1991;18:166.

Candidiasis

Vulvovaginal candidosis

GR KINGHORN, J Antimicrob Chemother 1991;28:59.

Mycotic vulvovaginitis—a broad overview BJ HOROWITZ, Am J Obstet Gynecol 1991;165:1188.

Vulvovaginitis—the role of patient compliance in treatment success

SA NIXON, Am J Obstet Gynecol 1991;165:1207.

Putative virulence factors of Candida albicans

JE CUTLER, Ann Rev Microbiol 1991;45:187.

Candida cell wall mannan in the vagina and its association with the signs and symptoms of vaginal candiodosis

WJ PIKE, J CLARKE, CJN LACEY, PA HUNTER, EGV EVANS, J Med Vet Mycol 1991;29:305.

Use of rDNA restriction fragment length polymorphisms to differentiate strains of Candida albicans in women with vulvovaginal candidiasis

GE STEIN, VL SHERIDAN, BB MAGEE, PT MAGEE, Diag Microbiol Infect Dis 1991;14:459.

Single dose treatment of vaginal candidosis—randomised comparison of Amorolfine (50 mg and 100 mg) and Clotrimazole (500 mg) in patients with vulvovaginal candidosis

A DELPALACIO, F SANZ, M GARCIABRAVO, C GIMENO, S CUETARA, P MIRANDA, AR NORIEGA, *Mycoses* 1991; 34:85.

Mode of action of anti-Candida drugs—focus on terconazole and other ergosterol biosynthesis inhibitors

H VANDENBOSSCHE, P MARICHAL, Am J Obstet Gynecol 1991;165:1193.

The in vitro activity of terconazole against yeasts—its topical long-acting therapeutic efficacy in experimental vaginal candidiasis in rats

J VANCUTSEM, Am J Obstet Gynecol 1991;165:1200.

Bacterial vaginosis

Bacterial vaginosis

CA SPIEGEL, Clin Microbiol Rev 1991;4:485.

Reproducibility of a scoring system for Gram stain diagnosis of bacterial vaginosis

MR JOESOEF, SL HILLIER, S JOSODIWONDO, M LINNAN, *J Clin Microbiol*, 1991;**29**:1730.

Direct Gram's stain of vaginal discharge as a means of diagnosing bacterial vaginosis BO ROTIMI, Z YAKUBU, OO ABUDU, TO BANJO, *J Med Microbiol* 1991;35:103.

Antibiosis between bacteria isolated from the vagina of women with and without signs of bacterial vaginosis

e nagy, m petterson, pa mardh, APMIS 1991; 99:739.

A new proline aminopeptidase assay for diagnosis of bacterial vaginosis

JN SCHOOMNAKER, BD LUNT, DW LAWELLIN, JI FRENCH, SL HILLIER, JA McGREGOR, Am J Obstet Gynecol 1991;165:737.

The characterization of gardnerella-vaginalis DNA using non-radioactive DNA probes

K NATH, DJ CHOI, D DEVLIN, Res Microbiol 1991;

K NATH, DJ CHOI, D DEVLIN, Res Microbiol 1991; 142:573.

Identification of two new antigenic subgroups within the genus Mobiluncus

JR SCHWEBKE, SA LUKEHART, MC ROBERTS, SL HILLIER, J Clin Microbiol 1991;29:2204.

Bacterial vaginosis—current review with indications for asymptomatic therapy

JL THOMASON, SM GELBART, NJ SCAGLIONE, Am J Obstet Gynecol 1991;165:1210. 70 Current publications

Trichomoniasis

Trichomoniasis—trends in diagnosis and management

JG LOSSICK, HL KENT, Am J Obstet Gynecol 1991; 165:1217.

Prevalence of *Trichomonas vaginalis* in men at high risk for sexually transmitted diseases SB SAXENA, RR JENKINS, Sex Transm Dis 1991;18:138.

Resolution of resistant vaginal trichomoniasis associated with the use of intravaginal nono-xynol-9

CH LIVENGOOD, JG LOSSICK, Obstet Gynecol 1991; 78:954.

In vitro phagocytic interaction between *Trichomonas vaginalis* isolates and bacteria C JULIANO, P CAPPUCCINELLI, A MATTANA, *Eur J Clin Microbiol Infect Dis* 1991;10:497.

Quinolones lack efficacy for treatment of trichomoniasis

CT KING, RW FINLEY, WB LUSHBAUGH, J Infect Dis 1991;164:624.

Effect of β -estradiol on production of the cell-detaching factor of *Trichomonas vaginalis* GE GARBER, LT LEMCHUKFAVEL, G ROUSSEAU, *J Clin Microbiol* 1991;29:1847.

Syphilis and other treponematoses

Identification of spirochetes related to *Treponema pallidum* in necrotising ulcerative gingivitis and chronic peridontitis GR RIVIERE, MA WAGONER, SA BAKERZANDER, KS WEISZ, DF ADAMS, L SIMONSON, SA LUKEHART, *N Engl J Med* 1991;325:539.

Detection by polymerase chain reaction of *Treponema pallidum* DNA in cerebrospinal fluid from neurosyphilis patients before and after antibiotic treatment

GT NOORDHOEK, EC WOLTERS, MEJ DEJONGE, JDA VANEMBDEN, J Clin Microbiol 1991;29:1976.

Neurosyphilis and human immunodeficiency virus infection

SG WHITEFIELD, AS EVERETT, MF REIN, J Infect Dis 1991;164:609.

IgM rheumatoid factor in congenital syphilis—associations with clinical and laboratory findings

MP MEYER, DW BEATTY, Clin Exp Immunol 1991; 86:43.

Identification of *Treponema pallidum* in amniotic fluid and fetal blood from pregnancies complicated by congenital syphilis GE WENDEL, PJ SANCHEZ, MT PETERS, TW HARSTAD, LL POTTER, MV NORGARD, *Obstet Gynecol* 1991;78:890.

An unusual constellation of sonographic findings associated with congenital syphilis LM HILL, JB MALONEY, Obstet Gynecol 1991;78:895.

Rising trend of reported primary genital syphilis and genital ulcer disease in Burkina-Faso

AE DAMIBA, KF KELLEY, SH VERMUND, Int J Epidemiol 1991;20:490.

Syphilis maligna—a HIV-related problem MA DERIE, JR MEKKES, EB COHEN, HJ HULSEBOSCH, Br J Dermatol 1991:125:390.

Splenic lyphocyte-T functions during early syphilitic infection are complex

TJ FITZGERALD, MA TOMAI, Infect Immun 1991; 59:4180.

The H3-anti-phospholipid idiotype is found in patients with systemic lupus erythematosus (SLE) but not in patients with syphilis

A HOMANN, R COMACCHIO, V BOSWARVA, M SUTJITA, K BRADLEY, Clin Exp Immunol 1991;86:207.

Herpes simplex virus

Molecular basis of latency in pathogenic human viruses

MA GARCIABLANCO, BR CULLEN, Science 1991; 254:815.

Mechanisms of herpes virus immuno-evasion DR FITZPATRICK, H BIELEFELDTOHMANN, Microbial Pathogen 1991;10:253.

Detection of viral DNA in neonatal herpes simplex virus infections—frequent and prolonged presence in serum and cerebrospinal fluid

h kimura, m futamura, h kito, t ando, m goto, k kuzishima, m shibata, t morishima, J Infect Dis 1991:164:289.

Extended duration of herpes simplex virus DNA in genital lesions detected by the polymerase chain reaction

RW CONE, AC HOBSON, J PALMER, M REMINGTON, L COREY, J Infect Dis 1991;164:757.

In vitro and in vivo characterization of herpes simplex virus clinical isolates recovered from patients infected with human immunodeficiency virus

EL HILL, GA HUNTER, MN ELLIS, Antimicrob Agents Chemother 1991;35:2322.

Herpes simplex virus infection of the placenta—the role of molecular pathology in the diagnosis of viral infection of placentalassociated tissues

DA SCHWARTZ, E CALDWELL, Arch Pathol Lab Med 1991;115:1141.

Comparison of cell culture with an amplified enzyme îmmunoassay for diagnosing genital herpes simplex infection

G KUDESIA, A VANHEGAN, S WAKE, RJ VANHEGAN, GR KINGHORN, *J Clin Pathol* 1991;**44**:778.

Inability of enzyme immunoassays to discriminate between infections with herpes simplex virus type-1 and type-2

R ASHLEY, A CENT, V MAGGS, A NAHMIAS, L COREY, Ann Int Med 1991;115:520.

Genotyping of herpes simplex viruses by polymerase chain reaction

H PIIPARINEN, A VAHERI, Arch Virol 1991;119:275.

Intratypic variations in neutralizable epitopes among herpes simplex type-2 isolates P BHATTARAKOSOL, C YOOSOOK, P MATANGKASOMBUT, Microbiol Immunol 1991;35:525.

A double-blind, placebo-controlled cytogenic study of oral acyclovir in patients with recurrent genital herpes

D CLIVE, L COREY, RC REICHMAN, LG DAVIS, JC HOZIER, J Infect Dis 1991;164:753.

Randomised, double-blind, placebocontrolled, clinic-initiated, Canadian multicenter trial of topical Edoxudine 3.0 percent cream in the treatment of recurrent genital herpes

SL SACKS, LD TYRRELL, D LAWEE, W SCHLECH, MJ GILL, FY AOKI, AY MARTEL, J SINGER, J Infect Dis 1991; 164:665.

Potentiating effect of ribavirin on the antiherpes activity of acyclovir

SN PACHEVA, Antiviral Res 1991;16:151.

Inhibition of herpes simplex virus type-1 and type-2 replication in vitro by mercurithio analogs of deoxyuridine

J HOLLIDAY, MV WILLIAMS, Antiviral Res 1991; 16:197.

Prolonged and potent therapeutic and prophylactic effects of (S)-1-[(3-hydroxy-2-phosphonylmethoxy)propyl]cytosine against herpes simplex virus type-2 infections in mice HY YANG, R DATEMA, Antimicrob Agents Chemother 1991;35:1596.

Development and evaluation of an ELISA using secreted recombinant glycoprotein-B for determination of IgG antibody to herpes simplex virus

MG REVELLO, R GUALANDRI, R MANSERVIGI, G GERNA, J Virol Meth 1991;34:57.

Effects on murine epidermal Langerhans cells of drugs known to cause recrudescent herpes simplex virus infection in a mouse model NA WILLIAMS, TJ HILL, J Invest Dermatol 1991;

Identification of a monocyte receptor on herpes virus-infected endothelial cells

97:933.

DR ETINGEN, RL SILVERSTEIN, DP HAJJAR, Proc Nat Acad Sci USA 1991;88:7200.

Enhanced malignant transformation induced by expression of a distinct protein domain of ribonucleotide reductase large subunit from herpes simplex virus type-2

MA ALI, D MCWEENEY, A MILOSAVLJEVIC, J JURKA, RJ JARIWALLA, Proc Nat Acad Sci USA 1991;88:8257.

Immunoprecipitation of herpes simplex virus polypeptides with human sera is related to their ELISA titre

m muranyiova, j rajcani, m krivjanska, j matos, j pogady, *Acta Virol* 1991;35:252.

The nucleotide sequence, 5' end, promoter domain and kinetics of expression of the gene encoding the herpes simplex virus type-2 latency-associated transcript

PR KRAUSE, JM OSTROVE, SE STRAUS, J Virol 1991; 65:5619.

Herpes simplex virus glycoprotein C is a receptor for complement component iC3b r talsinger, c seideldugan, l fries, hp heiemer, rj eisenberg, gh cohen, hm friedman, *J Infect Dis* 1991;164:750.

Different mechanisms of protection by monoclonal and polyclonal antibodies during the course of herpes simplex infection

AM EISHUBINGER, K MOHR, KE SCHNEWEIS, Intervirol 1991;32:351.

A gene delivery/recall system for neurons which utilizes ribonucleotide reductasenegative herpes simplex viruses

JY CHANG, EM JOHNSON, PD OLIVO, Virology 1991; 185:437.

Suppression of immune responses by herpes virus type-2-transformed murine tumor cells MRP DAS, DS GRIDLEY, JD KETTERING, *Immunol Let* 1991;30:37.

Human papillomavirus infection

Vulvovaginal human papillomavirus infections—clinical implications and management KD HATCH, Am J Obstet Gynecol 1991;165:1183.

Persistent anogenital warts EDITORIAL, Lancet 1991;338:1114.

Human papillomavirus infection and other risk factors for cervical neoplasia—a case control study

EAB MORRISON, GYF HO, SH VERMUND, GL GOLDBERG, AS KADISH, KF KELLEY, RD BURK, *Int J Cancer* 1991; 49:6.

Condylomata acuminata and risk of canceran epidemiological study

B SIGURGEIRSSON, B LINDELOF, G EKLUND, BMJ 1991; 303:341.

Human papillomavirus in the pathogenesis of anogenital cancer

HZ HAUSEN, Virology 1991;184:9.

The role of human papillomavirus in carcinoma

MB QUAN, RL MOY, J Am Acad Dermatol 1991;25:698.

Herpes simplex virus type-2—a possible interaction with human papillomavirus types 16/18 in the development of invasive cervical cancer

A HILDESHEIM, V MANN, LA BRINTON, M \$ZKLO, WC REEVES, WE RAWLS, Int J Cancer 1991;49:335.

Actiology parallel between anal cancer and cervical cancer

M MELBYE, P SPROGEL, Lancet 1991;338:657.

Intraepithelial neoplasia of the anal canal in hemorrhoidal tissue—a study of 19 cases

RL FOUST, PJ DEAN, MH STOLER, SM MOINUDDIN, Hum Pathol 1991;22:528.

Human papillomavirus DNA in anal carcinoma—comparison of in situ and dot blot hybridization

MA DUGGAN, VF BORAS, M INDUE, SE McGREGOR, Am J Clin Pathol 1991;96:318.

Human papillomavirus infection in vulvar lesions of lichen sclerosus et atrophicus

P KIENE, K MILDELANGOSCH, T LONING, Arch Dermatol Res 1991;283:445.

Vulvar squamous cell carcinoma an papillomaviruses—2 separate entities?

WA ANDERSEN, DW FRANQUEMONT, J WILLIAMS, PT TAYLOR, CP CRUM, Am J Obstet Gynecol 1991; 165:329.

Pathology of vulvar intraepithelial lesions and early invasive carcinomas

J PRAT, Hum Pathol 1991;22:877.

Is vestibular papillomatosis associated with human papillomavirus.

S COSTA, A ROTOLA, P TERZANO, P SECCHIERO, D DILUCA, MG POGGI, P MASOTTI, G MARTINELLI, E CASSAI, *J Med Virol* 1991;35:7.

Human papillomavirus DNA in tissue biopsy specimens of vulvar vestibulitis patients treated with interferon

SA UMPIERRE, RH KAUFMAN, E ADAM, KV WOODS, K ALDERSTORTHZ, Obstet Gynecol 1991;78:693.

Acute urethral obstruction due to condylomata acuminata

M CERVIGNI, V SCOTTO, M PANEI, C SBIROLI, Obstet Gynecol 1991;78:970.

Role of epidemiology in defining events that influence transmission and natural history of anogenital papillomavirus infections
L KOUTSKY, J Nat Cancer Inst 1991:83:978.

Determinants of genital human papillomavirus infection in young women

C LEY, HM BAUER, A REINGOLD, MH SCHIFFMAN, JC CHAMBERS, CJ TASHIRO, MM MANOS, J Nat Cancer Inst 1991:83:997.

The association between human papillomavirus deoxyribonucleic acid status and the results of cytologic rescreening tests in young, sexually active women

AB MOSCICKI, JM PALEFSKY, J GONZALES, GK SCHOOL-NIK, Am J Obstet Gynecol 1991;165:67.

Prospective serial study of viral change in the cervix and correlation with human papillomavirus genome status

HC KITCHENER, L NEILSON, RA BURNETT, L YOUNG, JCM MACNAB, Br J Obstet Gynaecol 1991;98:1042.

Correlation of the Papanicolaou smear and human papillomavirus type in women with biopsy-proven cervical squamous intraepithelial lesions

GJ NUOVO, LL WALSH, JL GENTILE, JS BLANCO, J KOULOS, A HEIMANN, Am J Clin Pathol 1991;96:544.

Increased age and mortality associated with cervical carcinomas negative for human papillomavirus RNA

GD HIGGINS, M DAVY, D RODER, DM UZELIN, GE PHILLIPS, CJ BURRELL, Lancet 1991;338:910.

Genital human papillomavirus infections in patients attending an inner-city STD clinic JE HORN, GM McQUILLAN, KV SHAH, P GUPTA, RW DANIAL, PARAY, TC QUINN, EW HOOK, Sex Transm Dis

1991;18:183.

Sequence variants of human papillomavirus type-16 in clinical samples permit verification and extension of epidemiological studies and construction of a phylogenetic tree

L HO, SY CHAN, V CHOW, T CHONG, SK TAY, LL VILLA, HV BERNARD, J Clin Microbiol 1991;29:1765.

Pathobiology of papillomavirus-related cervical diseases—prospects for immunodiagnosis

CP CRUM, S BARBER, JK ROCHE, Clin Microbiol Rev 1991:4:270.

High risk of human papillomavirus infection and cervical squamous intraepithelial lesions among women with symptomatic human immunodeficiency virus infection

VERMUND SH, KLEIN AS, FEINGOLD AR et al, Am J. Obstet Gynecol 1991;165:392.

The role of beta-carotene and other dietary factors in the aetiology of cervical dysplasia—results of a case-control study

HCW DEVET, PG KNIPSCHILD, MEC GROL, HJA SCHOUTEN, F STURMANS, Int J Epidemiol 1991;20:603.

Implication of human papillomavirus in postirradiation dysplasia

M FUJIMURA, RS OSTROW, T OKAGAKI, Cancer 1991; 68:2181.

Characterization of human papillomavirus type-66 from an invasive carcinoma of the uterine cervix

ar tawheed, s beaudenon, m favre, g orth, J Clin Microbiol 1991;29:2656.

Association of human papillomavirus with penile carcinoma—a study using polymerase chain reaction and in situ hybridization

VA VARMA, M SANCHEZLANIER, ER UNGER, C CLARK, R TICKMAN, K HEWANLOWE, ML CHENGGIS, DC SWAN, Hum Pathol 1991;22:908.

The presence of HPV type-6/11, type-13, type-16 and type-33 in Bowenoid papulosis in an HIV-positive male demonstrated by DNA in situ hybridization

J ROLIGHED, IM SORENSEN, NO JACOBSEN, H LINDEBERG, APMIS 1991;99:583.

Presence of human papillomavirus type-16 DNA sequences in human nonmelanoma skin cancers

We pierceall, kh goldberg, hn ananthaswamy, J Invest Dermatol 1991;97:880.

Seborrheic keratoses from the genital region may contain human papillomavirus DNA CL LEONARDI, WY ZHU, WH KINSEY, NS PENNEYS, Arch Dermatol 1991;127:1203.

Human papillomavirus (HPV) infection and their associations with oral disease

FJ CHANG, S SYRJANEN, J KELLOKOSKI, K SYRJANEN, J Oral Pathol Med 1991;20:305.

Verruca vulgaris of the larynx—demonstration of human papillomavirus types-6/11 by in situ hybridization

L BARNES, EJ YUNIS, FJ KREBS, E SONMEZALPAN, Arch Pathol Lab Med 1991;115:895.

Presence and integration of human papillomavirus type-6 in a tonsillar carcinoma JA BERCOVICH, CR CENTENO, OG AGUILAR, S GRINSTEIN,

T KAHN, J Gen Virol 1991;72:2569.

Human papillomavirus type-6 detected by the polymerase chain reaction in invasive sino-

nasal papillary squamous cell carcinoma R JUDD, SR ZAKI, LM COFFIELD, BL EVATT, Arch Pathol Lab Med 1991;115:1150.

Treatment failure of genital condylomata acuminata in women—role of the male sexual partner

HB KREBS, BF HELMKAMP, Am J Obstet Gynecol 1991; 165:337.

Conization for CIN associated with human papillomavirus infection

M YLISKOSKI, S SAARIKOSKI, K SYRJANEN, Arch Gynecol Obstet 1991;249:59.

Chronic ulceration following topical therapy with 5-fluorouracil for vaginal human papillomavirus-associated lesions

HB KREBS, BF HELMKAMP, Obstet Gynecol 1991; 78:205.

Vaginal adenosis and clear cell carcinoma after 5-fluorouracil treatment for condylomas A GOODMAN, LR ZUKERBERG, N NIKRUI, RE SCULLY, Cancer 1991;68:1628.

Prevalence of HPV cervical infection in a family planning clinic determined by polymerase chain reaction and dot blot hybridisation.

n hallam, j green, p gibson, j powis, j bibby, $J \, Med \, Virol \, 1991; 34:154.$

Genital human papillomavirus infection in Oslo studied by dot blot DNA hybridisation and the polymerase chain reaction

K GHOEN, JC SIEBKE, M FLIKKE, ET AL. J Med Virol 1991;34:159.

Identification of HPV—in situ hybridization or polymerase chain reaction MI ARENDS, *J Pathol* 1991;164:000.

Detection of human papillomavirus infection in tissue blocks by in situ hybridization as compared with polymerase chain reaction procedure

B SKYLDBERG, M KALANTARI, M KARKI, B JOHANSSON, B HAGMAR, L WALAAS, *Hum Pathol* 1991;22:578.

Detection of human papillomavirus DNA in formalin-fixed tissues by in situ hybridization after amplification by polymerase chain reaction

gj nuovo, p macconnell, a forde, p delvenne, $Am\ J\ Pathol\ 1991; 139:847.$

Detection of human papillomavirus DNA in gynaecological swabs by filter in situ hybridization

A MINCHEVA, L SHINDAROV, I KARAGEOSOV, B SLAVCHEV, D BACHVAROV, N VASILEV, V MAKAVEEVA, Acta Virol 1991;35:209.

Comparison of different insitu hybridization techniques for the detection of human papillomavirus DNA in cervical smears

W ZIMMERMANN, T NAUMANN, E BAUSCHKE, KD JOHANNSMEYER, B HERRMANN, A KLIMOV, L DOHNER, Acta Virol 1991;35:322.

Comparison of four non-radioactive and S-35-based methods for the detection of human papillomavirus DNA by insitu hybridization C CLAVEL, I BINNINGER, MC BOUTTERIN, M POLETTE, P BIREMBAUT, *J Virol Meth* 1991;33:253.

Detection of human papillomavirus in paraffin-embedded condylomata acuminata comparison of immunohistochemistry, in situ hybridization and polymerase chain reaction D SCHADENDORF, KH TIEDEMANN, N HAAS, BM CZARNETZKI, J Invest Dermatol 1991;97:549.

Detection of genital papillomavirus types by polymerase chain reaction using common primers

A JENKINS, BE KRISTIANSEN, E ASK, B OSKARSEN, E KRISTIANDEN, B LINDQVIST, C TROPE, K KJORSTAD, APMIS 1991;99:667.

Studies on vaccination against papillomaviruses—prophylactic and therapeutic vaccination with recombinant structural proteins

WFH JARRETT, KT SMITH, BW ONEIL, ET AL. Virology 1991;184:33.

Occurence of antibodies to L1, L2, E4 and E7 gene products of human papillomavirus type-6b, type-16 and type-18 among cervical cancer patients and controls

HG KOCHEL, M MONAZAHIAN, K SIEVERT, M HOHNE, C THOMSSEN, A TEICHMANN, P ARENDT, R THOMSSEN, Int J Cancer 1991;48:682.

Human papillomavirus type-18 E6 and E7 antibodies in human sera—increased anti-E7 prevalence in cervical cancer patients

C BLEUL, M MULLER, R FRANK, ET AL. J Clin Microbiol 1991:29:1579.

Comparison of ELISA and Western blotting for human papillomavirus type-16 E7 antibody determination

A SUCHANKOVA, L RITTEROVA, M KRCMAR, V KRCHNAK, J VAGNER, I JOCHMUS, L GISSMANN, J KANKA, V VONKA, J Gen Virol 1991;72:2577.

Differing characteristics of human papillomavirus RNA-positive and RNA-negative anal carcinomas

GD HIGGINS, DM UZELIN, GE PHILLIPS, AS PIETERSE, CJ BURRELL, Cancer 1991;68:561.

Integration of papillomavirus DNA near myc genes in genital carcinomas and its consequences for proto-oncogene expression

J COUTUTIER, X SASTREGARAU, S SCHNEIDERMAUN-OURY, A LABIB, G ORTH, J Virol 1991;65:4534.

Duplication of the upstream regulatory sequences increases the transformation potential of human papillomavirus type-11 M ROSEN, K AUBORN, Virology 1991;185:484.

Binding by immunoglobulin to the HPV-16derived protein-L1 and protein-E4 in cervical secretions of women with HPV-related cervical disease

KA SNYDER, SR BARBER, M SYMBULA, PT TAYLOR, CR CRUM, JK ROCHE, Cancer Res 1991;51:4423.

Immunohistochemical analysis of estrogen receptors, prognesterone receptors, Ki-67 antigen and human papillomavirus DNA in normal and neoplastic epithelium of the uterine cervix

I KONISHI, S FUJII, H NONOGAKI, Y NANBU, T IWAI, T MORI, Cancer 1991;68:1340.

A research for the relationship between human papillomavirus and human uterine cervical carcinoma. 1. the identification of viral genome and subgenomic sequences in biopsies of Chinese patients

JY SI, K LEE, RC HAN, ET AL. J Cancer Res Clin Oncol 1991:117:454.

A research for the relationship between human papillomavirus and human uterine cervical carcinoma. 2. molecular genetic and ultrastructural study on the transforming activity of recombinant retrovirus containing human papillomavirus type-16 subgenomic sequences

JY SI, K LEE, W ZHANG, ET AL. J Cancer Res Clin Oncol 1991;117:460.

Constitutive releases of IL6 by human papillomavirus type-16 (HPV16)-harboring keratinocytes—a mechanism augmenting the NK-cell-mediated lysis of HPV-bearing neoplastic cells

J MALEJCZYK, M MALEJCZYK, A URBANSKI, A KOCK, S JABLONSKA, G ORTH, TA LUGER, Cell Immunol 1991;136:155.

Identification of T-cell and B-cell epitopes of the E7 protein of human papillomavirus type-

sa comerford, dj mccance, g dougan, jp tite, J Virol 1991;65:4681.

The full-length E6 protein of human papillomavirus type-16 has transforming and transactivating activities and cooperates with E7 to immortalize keratinocytes in culture SA SEDMAN, MS BARBOSA, WC VASS, ML HUBBERT, JA HAAS, DR LOWY, JT SCHILLER, J Virol 1991;65:4860.

Human papillomavirus type-18 E6*, E6 and E7 protein synthesis in cell-free translation systems and comparison of E6 and E7 invitro translation products to proteins immunoprecipitated from human epithelial cells B ROGGENBUCK, PM LARSEN, SJ FEY, D BARTSCH, L GISSMAN, E SCHARZ, J Virology 1991;65:5068.

Sequencing data on the long control region of human papillomavirus type-16 M KRAJINOVIC, A SAVIC, *J Gen Virol* 1991;72:2573.

Nucleotide and amino acid sequence variation in the L1 and E7 open reading frames of human papillomavirus type-6 and type-16 JP ICENOGLE, P SATHYA, DL MILLER, RA TUCKER, WE RAWLS, Virology 1991;184:101.

Immortalization of normal human bronchial epithelial cells by human papillomavirus 16 or

JC WILLEY, A BROUSSOUD, A SLEEMI, WP BENNETT, P CERUTTI, CC HARRIS, Cancer Res 1991;51:5370.

Malignant human papillomavirus type-16transformed human keratinocytes exhibit altered expression of extracellular matrix glycoproteins

N SHEIBANI, JS RHIM, BL ALLENHOFFMANN, Cancer Res 1991;51:5967.

Quantitative detection of spliced E6-E7 transcripts of human papillomavirus type-16 in cervical premalignant lesions

H SHIRASAWA, H TANZAWAM, T MATSUNAGA, B SIMIZU, Virology 1991;184:795.

Human papillomavirus type-16 immortalized cervical keratinocytes contain transcripts encoding E6, E7 and E2 initiated at the P97 promoter and express high levels of E7

M NASSERI, JR GAGE, A LORINCZ, FO WETTSTEIN, Virology 1991;184:131.

Type-specific and cross-negative epitopes in human papillomavirus type-16 capsid proteins

BK BEISS, E HEIMER, A FELIX, RD BURK, DB RITTER, RG MALLON, AS KADISH, *Virology* 1991;184:460.

Specific interaction between HPV-16 E1-E4 and cytokeratins results in collapse of the epithelial cell intermediate filament network JDOORBAR, S ELY, J STERLING, C MCLEAN, L CRAWFORD, Nature 1991;352:824.

Purification and characterization of human papillomavirus type-16 E7 protein with preferential binding capacity to the under phosphorylated form of retinoblastoma gene production

Y IMAL, Y MNATSUSHIMA, T SUGIMURA, M TERADA, J Virol 1991:65:4966. Immortalization by human papillomavirus type-16 alters retinoid regulation of human ectocervical epithelial cell differentiation C AGARWAL, EA RORKE, JC IRWIN, RL ECKERT, Cancer Res 1991:51:3982.

Biologic properties and nucleotide sequence analysis of human papillomavirus type-51 O LUNGU, CP CRUM, S SILCERSTEIN, *J Virol* 1991; 65:4216

Characterization of a novel human papillomavirus DNA in the cervical carcinoma cell line ME 180

s reuter, h delius, t kahn, b hofmann, hz hausen, e schwarz, *J Virol* 1991;65:5564.

RU486 inhibits glucocorticoid hormonedependent oncogenesis by human papillomavirus type-16 DNA

MM PATER, A PATER, Virology 1991;183:799.

A keratinocyte-specific transcription factor, KRF-1, interacts with AP-1 to activate expressions of human papillomavirus type-18 in squamous epithelial cells

DH MACK, LA LAIMINS, Proc Nat Acad Sci USA 1991;88:9102.

Expression of vaccinia recombinant HPV 16 L1 and L2 ORF proteins in epithelial cells is sufficient for assembly of HPV virion-like particles

J ZHOU, XY SUN, DJ STENZEL, I HFRAZER, Virology 1991;185:251.

The enhancer of human papillomavirus type-16—binding sites for the ubiquitous transcription factor-oct-1, factor-NFA-TEF-2, factor-NF1 and factor-AP-1 participate in epithelial-cell-specific transcription

T CHONG, D APT, B GLOSS, M ISA, HV BERNARD, J Virol 1991;65:5933.

Cervical cytology and colposcopy

The audit of cervical cytology screening programmes—discussion paper HE EWART, J R Soc Med 1991;84:488.

Cervical cancer screening—who is not screened and why

LC HARLAN, AB BERNSTEIN, LG KESSLER, Am J Pub Health 1991;81:885.

Adverse psychologic consequences of positive cytologic cervical screening

C LERMAN, SM MILLER, R SCARBOROUGH, P HANJANI, S NOLTE, D SMITH, Am J Obstet Gynecol 1991; 165:658.

Screening for cervical cancer by direct inspection

WP SOUTTER, Lancet 1991;338:817.

A randomized trial of three methods of obtaining Papanicolaou smears

RG PRETORIUS, M DASEGHI, N FOTHERINGHAM, N SEMRAD, WG WATRING, Obstet Gynecol 1991; 78:831.

Improving the cytobrush as an aid in the evaluation of the abnormal Papanicolaou test JA GOSEWEHR, TM JULIAN, BJ OCONNELL, Obstet Gynecol 1991;78:440.

Distinguishing tubal metaplasia from endocervical dysplasia on cervical Papanicolaou smears

L VANLE, D NOVOTNY, DJ DOTTERS, Obstet Gynecol 1991;78:974.

The efficacy of an automated preparation device for cervical cytology

ML HUTCHINSON, CM CASSIN, HG BALL, Am J Clin Pathol 1991:96:300.

A quality-control program for colposcopic

JL BENEDET, GH ANDERSON, JP MATISIC, DM MILLER, Obstet Gynecol 1991;78:872.

Loop electrosurgical excision procedures gaining acceptance for cervical intraepithelial neoplasia

T RANDALL, JAMA 1991;266:460.

Ten years after cryosurgical treatment of cervical intraepithelial neoplasia

J DRAEBYKRISTIANSEN, M GARSAAE, M BRUUN, K HAN-SEN, Am J Obstet Gynecol 1991;165:43.

Endocervical gland involvement by cervical grade-IIIintraepithelial neoplasia predictive value for residual and/or recurrent

IOVINE, LF HOROWITZ, EC VAMVAKAS, Cancer 1991;68:1932.

Other sexually transmitted diseases

Sexually transmitted disease in mothers of with congenital cytomegalovirus neonates infection

KB FOWLER, RF PASS, J Infect Dis 1991;164:259.

Isolation of anaerobes from clinical chancroid associated with fluctuant bubo in men

B KUMAR, VK SHARMA, V BAKAYA, A AYYAGAR, $Ind\ J$ Med Res Sect A 1991;93:236.

Low prevalence of sexual transmission of hepatitis-C virus in sex partners of seropositive intravenous drug users

CT PACHUCKI, JR ELNTIND, D SCHAFF, MR SCHAEFER, CA HEYNEN, TJ HOLZER, GJ DAWSON, W FORUS, J Infect Dis 1991;164:820.

Prevalence of hepatitis-C virus infection among heterosexuals with multiple partners GJJ VANDOORNUM, C HOOYKAAS, MT CUYPERS, MMD VANDERLINDEN, RA COUTINHO, J Med Virol 1991;35:22.

Possibility of heterosexual transmission of hepatitis-C virus

M ITURRIZA, CILIA, E PEREZTRALLERO, G J ARRIZABALAGA, JA IRIBARREN, Eur J Clin Microbiol Infect Dis 1991;10:533.

The lack of transmission of NANB/C hepatitis between acute and chronically infected patients and their heterosexual partners S SHEV, R WEJSTAL, M WAHL, S HERMODSSON,

G NORKRANS, Scand J Infect Dis 1991;23:407.

Direct detection of molluscum contagiosum virus in clinical specimens by dot blot hybridization

JW HURST, B FORGHANI, CS CHAN, L OSHIRO, G DARAI, JClin Microbiol 1991:29:1959.

Sexually transmitted diseases—bacterial infections

DM BUNTIN, T ROSEN, JL LESHER, H PLOTNICK, ME BRADEMAS, TG BERGER, J Am Acad Dermatol 1991;25:287.

Sexually transmitted diseases—viruses and ectoparasites

DM BUNTIN, T ROSEN, JL LESHER, H PLOTNICK, ME BRADEMAS, TG BERGER, J Am Acad Dermatol 1991;25:527.

The treatment of human ectoparasite infec-

DA BURNS, Br J Dermatol 1991;125:89.

Dyplastic vulvar nevi

Am J Clin Pathol 1991;96:664.

I BLICKSTEIN, E FELDBERG, R DGANI, H BENHUR, B CZERNOBILSKY, Obstet Gynecol 1991;78:968.

Scrotal carcinoid—presenting manifestation of multiple lesions in the small intestine RF LODATO, GJ ZENTNER, CA GOMEZ, LE NOCHOMOVITZ,

Public health and social aspects

Sexually transmitted diseases in the 1990s W CATES, AR HINMAN, N Engl J Med 1991;325:1368.

An epidemiological approach to sexually transmitted diseases—with special reference to contact tracing and screening

K RAMSTEDT, Acta Dermato-Venereol 1991;\$157:9.

Sexually transmitted diseases in a population of intravenous drug users—association with seropositivity to the human immunodeficiency

KE NELSON, D VLAHOV, S COHN, M ODUNMBAKU, A LINDSAY, JC ANTHONY, EW HOOK, J Infect Dis 1991;164:457.

Alcohol consumption and unsafe sex—a comparison of heterosexuals and homosexual men KF TROCKI, BC LEIGH, J AIDS 1991;4:981.

Homosexual men who engage in high-risk sexual behaviour—a multicentre comparison LS DOLL, RH BYERS, G BOLAN, ET AL. Sex Transm Dis 1991;18:170.

The response of American women to the threat of AIDS and other sexually transmitted

AA CAMPBELL, W BALDWIN, J AIDS 1991;4:1133.

Microbiology and Immunology

The vaginal ecosystem

PA MARDH, Am J Obstet Gynecol 1991;165:1163.

Dermatology

Two cases of genital Paget's disease with bilateral axillary involvement—mutability of axillary lesions

S IMAKADO, M ABE, T OKUMO, Y URATA, K NAKAGAWA, K OHARA, Arch Dermatol 1991;127:1243.

Miscellaneous

Sexually transmitted disease—advances in diagnostic biotechnologies—a brief overview m laplaca, mc re, m laplaca, r cevenini, *Microbiol* 1991;14:267.

Epidemiology of vaginitis

HL KENT, Am J Obstet Gynecol 1991;165:1168.

Vulvitis and vulvovaginitis-cutaneous considerations

M MCKAY, Am J Obstet Gynecol 1991;165:1176.

Pudendal neuralgia

MLC TURNER, SC MARINOFF, Am J Obstet Gynecol 1991:165:1233.

Toxic shock syndrome—an update AL REINGOLD, Am J Obstet Gynecol 1991;165:1236.

Nonbarrier contraceptives and vaginitis and vaginosis

s ROY, Am J Obstet Gynecol 1991;165:1240.

Cytolytic vaginosis

LJ CIBLEY, LJ CIBLEY, Am J Obstet Gynecol 1991; 165-1245

Postpartum vaginal atrophy

PM WISNIEWSKI, EJ WILKINSON, Am J Obstet Gynecol 1991:165:1249.

Vaginal cancer—the role of infections and environmental factors

MJ MERIND, Am J Obstet Gynecol 1991;165:1255.

Rape and sexually transmitted diseases patterns of referral and incidence in a department of genitourinary medicine

JDC ROSS, GR SCOTT, A BUSUTTIL, J R Soc Med 1991;84:657.

Sexually transmitted diseases in postpubertal female rape victims

JB GLASER, J SCHACHTER, S BENES, M CUMMINGS, CA FRANCES, WM MCCORMACK, J Infect Dis 1991; 164:726.

Vulvar vestibulitis (Editorial) Lancet 1991;338:729.

Vulvar vestibulitis syndrome—a clinicopathological study

CB FURLONGE, RN THIN, BE EVANS, PH MCKEE, Br JObstet Gynecol 1991;98:703.

Vulvar vestibulitis syndrome—an overview SC MARINOFF, MLC TURNER, Am J Obstet Gynecol

Lymphocytes from the site of disease in reactive arthritis indicate antigen-specific immunopathology

DK FORD, J Infect Dis 1991;164:1032.

Refractory chronic bacterial prostatitis—a re-evaluation of ciprofloxacin treatment after a median follow up of 30 months

W WEIDNER, HG SCHIEFER, E BRAHLER, J Urol 1991;146:350.

74 Current publications

Atypical intraepithelia lesions of the prostate gland

WM MURPHY, Am J Clin Pathol 1991;96:561.

Bilateral testicular infarction caused by epididymitis. Case report

DJ EISNER, SM GOLDMAN, J PETRONIS, SH MILLOMOND, Am J Roentgenol 1991;157:517.

Laparoscopic treatment of painful perihepatic adhesions in Fitz-Hugh-Curtis syndrome

S OWENS, TR YEKO, R BLOY, GB MAROULIS, Obstet Gynecol 1991;78:542.

A life-threatening sexually transmitted Haemophilus influenzae in septic abortion—a case report

ON PINHASHAMIEL, E SCHIFF, G BENBARUCH, S MASHIACH, B REICHMAN. Am J Obstet Gynecol 1991;165:66.

β-Lactamase inhibition—therapeutic implications in infectious diseases—an overview RC MOELLERING, Rev Infect Dis 1991;13:S723.

High risk of squamous cell carcinoma of the cervix for women with HLA-DQw3
R WANK, C THOMSSEN, Nature 1991;352:723.

Nuns, virgins and spinsters—Rigoni-Stern

and cervical cancer revisited

M GRIFFITHS, Br J Obstet Gynaecol 1991;98:797.

Concentration of metronidazole in cervical

mucus and serum after single and repeated oral doses

IG SALASHERRERA, RM PEARSON, A JOHNSTON, P TURNER, J Antimicrob Chemother 1991;28:283.

The effect of frequent nonoxynol-9 use on the vaginal and cervical mucosa

S NIRUTHISARD, RE RODDY, S CHUTIVONGSE, Sex Transm Dis 1991;18:176.

Evaluation of the effects of a female condom on the lower genital tract

DE SOPER, MJ BROCKERLL, HP DALTON, Contraception 1991:44:21.

A difference in hypothalamic structure between heterosexual and homosexual men S LEVAY, Science 1991;253:1034.

Transsexualism (Editorial). Lancet 1991;338:603.

Testicular regression syndrome—a pathological study of 77 cases

NM SMITH, RW BYARD, AJ BOURNE, Histopathol 1991:19:269.

Vaginal laceration following a jet-ski accident HK HAEFNER, HF ANDERSEN, MP JOHNSON, Obstet Gynecol 1991;78:986.